COLSA

Data and Knowledge Solutions

Understanding the Concept

In the recent past, a subject matter expert may have had the ability to track, process, recognize, and understand all of the information and knowledge captured in an organization, or at a minimum know how to quickly retrieve what is needed.

As organizations and missions grow and evolve, more data is made available, and technologies change, there is an increasing loss of ability to understand and recall knowledge and information available across the organization. Combined with increasing expectations for data-driven decision support, this results in a large gap in capability vs. expectations and missed opportunities in the data.

Capabilities

In many cases, the complexity of the data and knowledge requires more than a shared drive or typical database solution. From traditional relational databases to the latest in graph DB technologies, COLSA's Data Scientists have extensive experience with:

- Multi-source and multi-format data (e.g., unstructured text documents, structured log files, image and video-based text extraction, table extraction, etc.)

- Various NLP approaches such as TF-IDF, LDA, and Named Entity Recognition, which are used to populate knowledge graphs and establish similarity measures between documents.

- Leveraging advanced algorithms that make connections within the data, making finding meaningful information easier.

- Exploitation of the knowledge base, to include metrics generation and visualization, auto-generated wiki pages, and advanced search and discovery capabilities.

Services & Approach

COLSA's approach to solving this type of problem begins with establishing an understanding of the organization's mission and unique knowledge and data requirements, as well as other considerations such as alignment to Department or Agency policy, strategy, and direction.

From there, we can quickly determine an approach best suited to balance organizational requirements, complexity and attributes of the data, knowledge management goals, metrics and KPP requirements, existing staff capabilities, and budget. Sometimes the best solution for an organization doesn't require a technology-based answer and is simply a matter of implementing changes in process. Our solutioning approach looks at all angles.